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ABSTRACT

This report examines the changing industrial structure of work in the southern United States, with particular emphasis on industry and occupational projections for this region and the educational requirements for tomorrow's jobs. Also examined are expected annual earnings, projected unemployment rates, and part-time employment trends associated with emerging jobs in the South. A switch from industrial production to service employment has been occurring. The largest numbers of new jobs are among those occupations requiring no postsecondary degree, but a significant portion of the fastest growing jobs are demanding postsecondary training or degrees. This polarization will exacerbate the gap between the educated and undereducated. A section on the state of education in the rural South shows that while the number of Southerners graduating from high school and attending college is growing, the region as a whole still lags behind the rest of the nation in terms of educational attainment and academic performance. It is critical that policy makers devote balanced attention to education/training and the expansion of better paying job opportunities in the rural South. Educational improvement efforts must include the non-college bound, African Americans, and Hispanics. Factors associated with community economic growth that rely on improvements in education include high public education expenditures, greater high school completion rates, higher concentrations of employment in service industries and higher adult literacy rates. (Contains 42 references.) (TD)

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Rural Development Issues Impacting the South

The Changing Nature of Work in the South: The Polarization of Tomorrow's Workforce

Melissa A. Barfield and Lionel J. Beaulieu
Southern Rural Development Center
Mississippi State University

July 1999

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Introduction

Labor markets have undergone many changes in the South; shifts which have had a profound impact on the region. Simply put, a switch from industrial production to service employment has been occurring; white collar workers are slowly, but surely, replacing blue collar workers. Such shifts have raised the qualifications needed to hold certain service-sector jobs. Consequently, an increasing proportion of the workforce now finds itself in need of better education and higher level skills. But, at the same time, job growth is occurring at the other extreme, in occupations requiring little or no formal training. This report examines the changes occurring in the Southern workforce. Serving as the primary data sources for illustrating the nature of labor market adjustments in the region are the industry and occupational projections from the Bureau of Economic Analysis, America's Labor Market Information System, and the Bureau of Labor Statistics. The analysis shows that a polarization is emerging within tomorrow's workforce. The largest numbers of new jobs are taking place among those occupations requiring no post-secondary degree. On the other hand, a significant portion of the fastest growing occupations are demanding post-secondary training or degrees. These trends have important implications on the anticipated earnings and employment experiences of Southerners.

This report examines the changing industrial structure of work in the South, with particular emphasis on industry and occupational projections for this region. Furthermore, the educational requirements for tomorrow's jobs are explored in order to determine if Southerners will be prepared for these coming changes. Also examined are the expected annual earnings, projected unemployment rates, and the part-time employment trends associated with the emerging jobs in the South. Finally, the likely implications of these changes on the rural South are outlined.

The Changing Industrial Structure of Work: A National Perspective

The U.S. workforce has been undergoing many changes over the course of the last two decades. Rapid technological change and growing markets for goods and services has spurred tremendous growth in the service industries [20]. Traditional blue-collar, production-oriented jobs are being replaced with white-collar, service sector positions. Technological innovations, especially within the computer industry, have altered efficiency and productive processes. Growing international markets have expanded the opportunity to buy and sell goods. National deregulation has freed up trade policies and aging baby boomers have created new and stronger markets for goods and services.

Other important changes affecting the workforce have occurred in manufacturing, an industry which once was a dominant force in the U.S. economy—especially in the rural South. With the increase in international trade, goods can now be produced in other countries and imported to the U.S. inexpensively. U.S. manufacturing jobs, especially low-skill manufacturing, have eroded [32]. Such job losses have disproportionately affected rural areas of the South, areas which have relied on a workforce having little skills or education [25, 30]. Moreover, the prognosis for the future remains dim—low skilled manufacturing jobs will continue to disappear or offer depressed wages as U.S. companies seek to operate

successfully in a global marketplace [32]. In order to remain competitive, many U.S. manufacturing firms are now retooling, a shift that is requiring a more highly-skilled, multi-talented workforce.

These structural changes are leading to important shifts in the workforce. Education and technology are increasingly driving economic growth. As such, the demand for a highly skilled and educated workforce is expanding. The fastest growth, for example, is projected to occur among those occupations requiring an associates degree or higher, with jobs in computer specialities and health services leading the way [4]. On the other hand, growth also is expected to occur among low-skilled occupations, such as waiters and waitresses [22]. These positions are not likely to offer jobholders much economic security.

The Changing Nature of Work in the South: A Look at the Future

In light of the occupational shifts currently underway in our national economy, what is the prognosis for the U.S. South? Will the South be a mirror image of the nation, or will its past history of under-investment in education and active pursuit of low-skilled jobs, temper the growth of higher-skilled good paying jobs in the region?

Industry Projections

To help answer these questions, data from the Bureau of Economic Analysis' regional employment projections by industry were analyzed [a]. These data were grouped into nine BEA categories, and examined for each of the South's thirteen states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. Attention was given to industry projections for 1993, 2005, 2015, and 2025. For purposes of this report, state data were aggregated at the regional level to facilitate analyses.

As shown in Table 1, service industries are projected to realize some of the largest gains in employment, including those associated with hotel, health, legal, education, and social services [b]. Growth in these industries is expected to swell from 11,721,000 jobs in 1993 to 20,473,000 by 2025. Sizable numbers of people are also expected to be employed in wholesale and retail trade sectors, growing from 9,523,000 in 1993 to 13,023,000 by 2025. Modest growth will occur in government positions (civilian, miliary, state, and local), while durable and nondurable goods manufacturing will experience slight increases through 2015. The smallest shifts in employment will take place in the mining and agricultural services industries.

Which of these industries will grow most rapidly? Which industries will lose jobs? Job additions (or losses) and percent change in employment for the years 2005, 2015 and 2025 are reported in Table 2 [c]. Once again, the service industries are expected to experience large and rapid increases in employment. By 2005, they are projected to grow by 39 percent in the South, gaining 4,550,000 jobs in twelve years. Significant increases in employment will also occur for the wholesale and retail trade industry, growing 21 percent by 2005 with a gain of 2,025,000 new jobs. Although agricultural services also will

Table 1. Industry Employment Projections (in thousands) for the South in 1993, 2005, 2015, and 2025

Major Industries	1993 Employment	2005 Employment	2015 Employment	2025 Employment
Agricultural Services	498	700	819	881
Mining	497	438	405	376
Construction	2,426	2,949	3,210	3,319
Manufacturing	5,899	6,185	6,245	6,169
Transportation and Utilities	2,143	2,584	2,805	2,898
Wholesale and Retail	9,523	11,548	12,590	13,023
F.I.R.E.	2,791	3,363	3,675	3,823
Services	11,721	16,270	18,947	20,473
Government	7,243	8,193	8,674	8,859

Non-farm industries only.
Source: Bureau of Economic Analysis, Regional Industry Employment Projections.

Table 2. Industry Projections for the South from 1993-2025, Job Additions or Losses (in thousands) and Percent Change by Industry

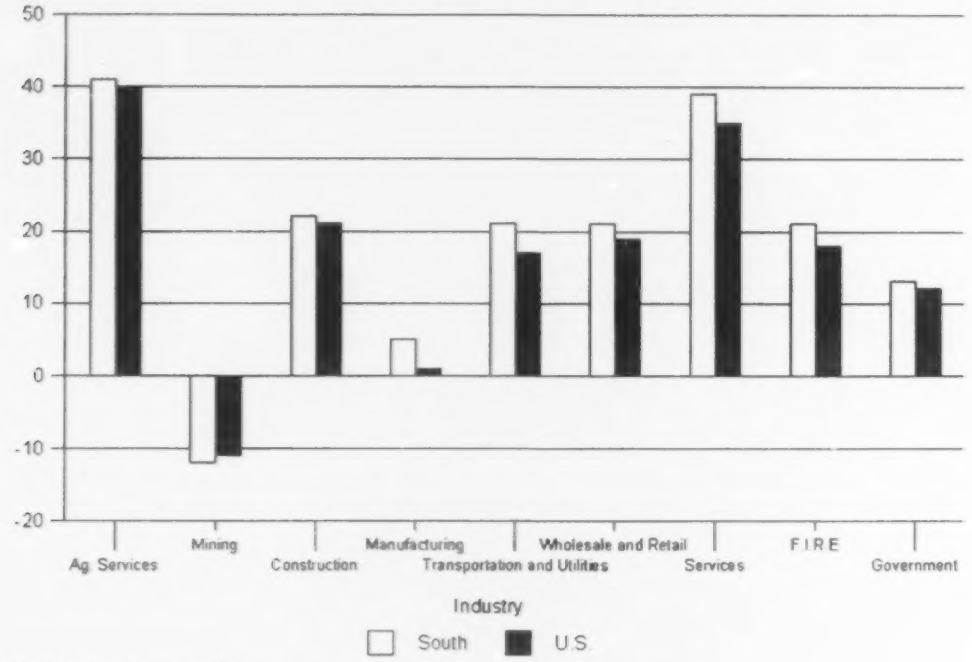
	1993-2005		2005-2015		2015-2025	
Major Industries	Change in Number of Jobs	Percent Change	Change in Number of Jobs	Percent Change	Change in Number of Jobs	Percent Change
Agricultural Services	202	41	119	17	62	8
Mining	-59	-12	-34	-8	-29	-7
Construction	523	22	261	9	109	3
Manufacturing	286	5	60	1	-76	-1
Transportation and Utilities	441	21	221	9	93	3
Wholesale and Retail	2,025	21	1,042	9	433	3
F.I.R.E.	572	21	311	9	149	4
Services	4,550	39	2,676	16	1,527	8
Government	949	13	481	6	186	2

Non-farm industries only.
Source: Bureau of Economic Analysis, Regional Industry Employment Projections.

grow rapidly (41 percent by 2005), fewer jobs will be created in this industry (a gain of 202,000). Construction, transportation, and utility industries, as well as finance, insurance, and real estate, also will contribute new jobs to the economy. Manufacturing is projected to increase until 2015 and decline thereafter, losing 76,000 jobs from 2015 to 2025. The mining industry will suffer declines in employment during each of the three time periods under examination, declining 12, 8, and 7 percent, respectively.

What is increasingly clear is that the South will outpace the nation in terms of employment growth within each of the nine major industries, especially over the course of the 1993 to 2005 time period (see Figure 1). Substantial differences are apparent in the manufacturing, transportation and utilities, services, and finance, insurance, and real estate sectors, with the pace of growth being noticeably faster in

Figure 1. Percent Change in Employment by Industry, the South vs. the U.S., 1993 to 2005



Non-farm industries only.
Source: Bureau of Economic Analysis, Regional Industry Employment Projections.

the South. Manufacturing, long a staple of the Southern economy, is expected to realize greater employment growth in the South than in the nation as a whole.

In sum, these trends suggest that the South will mimic national trends with regard to the changing structure of employment, but at a faster pace. The South's service industries will be the biggest employers in the years ahead. Significant employment growth will occur, as well, in the wholesale and retail trade areas. Manufacturing employment, while declining nationally, will continue to remain a significant employer in the South.

Industry Projections in the U.S. South

- Service industries will be the biggest employers.
- Service industries will experience rapid growth.
- Manufacturing will remain relatively strong in the South.
- In many of the nation's major industries, the rate of employment growth will be more accelerated in the South than the nation as a whole.

A Look at Projected Occupational Shifts in the South

Industry projections, while illustrating the changing structure of employment, offer few clues of the educational requirements associated with occupations within these industries. In order to examine

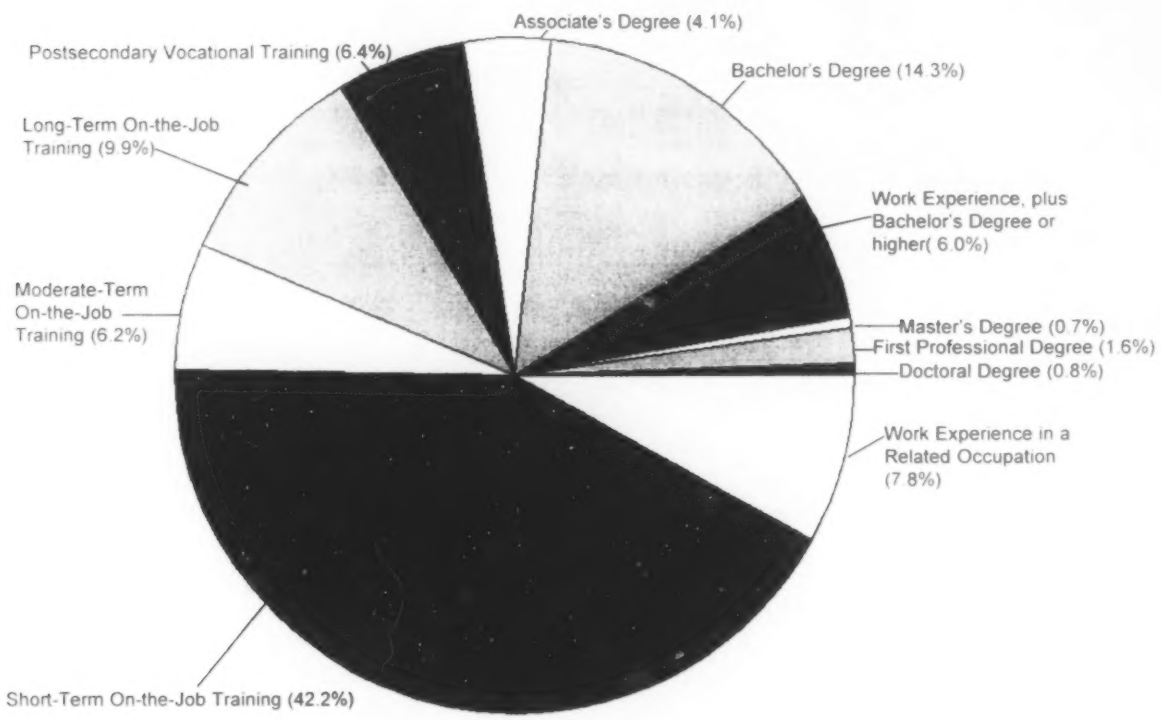
changes in job skill requirements, state level employment projections for 510 specific occupations were gathered from America's Labor Market Information System. Employment projections were combined with national data from the Bureau of Labor Statistics (BLS) to determine the educational and/or training requirements, the expected average annual incomes (using 1997 figures), and the unemployment/part-time employment quartiles associated with jobs included in our analysis [d].

What educational demands are likely to be associated with the South's occupational structure? Figure 2 begins to offer some response to this question. Most new jobs in the South will demand little formal training. In fact, the majority of new jobs will require no formal post-secondary education. Rather, short-term on the job training, or training that can be acquired in less than a month, is projected to be in greatest demand. Consequently, most new slots will not require its workers to possess a high-level of skills. However, for one out of four jobs, an associate's degree or higher will be a prerequisite.

New Jobs in the South

- The majority of new jobs will require little education or specialized training.
- However, more than 27 percent will require an associates's degree or higher.

Figure 2. Occupational Projections of New Jobs in the South, 1996-2005, by Educational Requirements


Associate's Degree (4.1%)
Postsecondary Vocational Training (6.4%)
Bachelor's Degree (14.3%)
Long-Term On-the-Job Training (9.9%)
Work Experience, plus Bachelor's Degree or higher(6.0%)
Moderate-Term On-the-Job Training (6.2%)
Master's Degree (0.7%)
First Professional Degree (1.6%)
Doctoral Degree (0.8%)
Work Experience in a Related Occupation (7.8%)
Short-Term On-the-Job Training (42.2%)

Source: America's Labor Market Information Service and Bureau of Labor Statistics

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Given the demand for low skill employment, earnings for the majority of the new jobs emerging in the South are likely to be low. Information presented in Figure 3 indicates that the majority of new jobs will be created in those occupations that provide less than $25,000 in wage compensation (52.3 percent). On the other hand, more than one fourth of these new jobs will offer annual wages of $35,000 or more, on average.

Financial Compensation Among the South's New Jobs

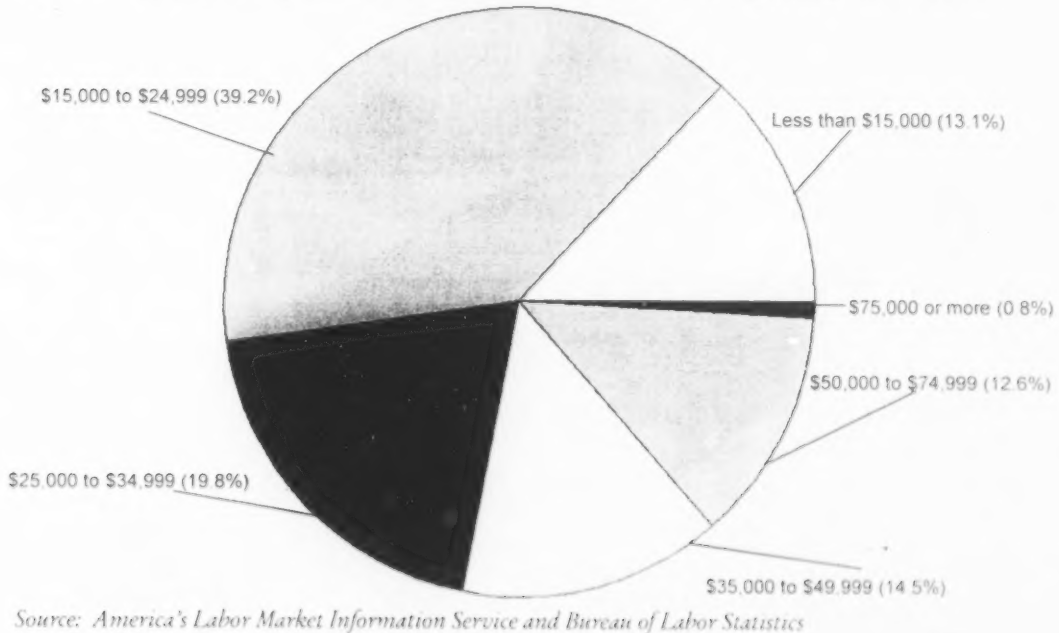
- Over half of new workers will be earning less than $25,000 a year.
- A significant proportion (over 27%) will be earning incomes greater than $35,000 a year.

Which occupations will experience the largest numerical growth in the South? The twenty occupations that are projected to create the greatest *number* of new jobs are reported in Table 3. The educational requirements associated with these occupations are noted as well. Obviously, the greatest growth in jobs will occur in occupations linked to the service sector. Cashiers, for example, will experience the most growth, followed by retail salespersons, waiters and waitresses, janitors and cleaners, guards, and so on. The health services will also realize significant growth—nurses, nurses aids, home health aides, and related jobs. Office workers will comprise a subset of the top growing occupations, particularly general managers, top executives, general office clerks and secretaries. Educational services, transportation, and technology information occupations will realize healthy expansion.

Tomorrow's Largest Job Growth

- The majority of tomorrow's new jobs will fall into the unskilled service industries that offer low earnings.
- Office and managerial workers will be in great demand.
- Many of these new jobs being created will offer only part-time employment.

Figure 3. Occupational Projections of New Jobs in the South, 1996- 2005, by Average 1997 Incomes



Source: America's Labor Market Information Service and Bureau of Labor Statistics

What type of skills will tomorrow's workers need to fill these positions? According to this analysis, nearly three-fourths of these occupations will require only "short-term on the job training." Approximately one in four will demand an associate's degree or higher. Thus, the occupations that are expected to realize the largest number of job openings in the South are those that will require skills that can be captured in less than a single month of training.

Given that some of the occupations in the South with the largest numrical growth will require little education beyond high school, the earnings, part-time employment, and unemployment rates associated with these jobs could be a source of concern. These very issues are examined in Table 4. For many of those occupations that are expected to realize the largest growth in jobs, annual wages are expected to be low. In fact, average incomes associated with four of these occupations are expected to fall below $15,000 a year (i.e. waiters/waitresses, child care workers, cashiers, and food preparation workers). Seven will fall between $15,000 and $20,000. Together, more than half will dip below the $20,000 mark. Only three occupations will command wages that average more than $30,000 a year.

The second column in Table 4 indicates that three-fourths of the occupations that are projected to experience the largest number of new jobs will have a "very high" or "high" probability of offering only

Table 3. Occupational Projections for the South, Largest Number of New Jobs by Educational Requirements, 1996-2005

Rank	New Jobs	Occupation	Educational Requirements
1	290,650	Cashiers	Short-term on-the-job training
2	263,150	Retail Salesperson	Short-term on-the-job training
3	239,950	General Managers and Top Executives	Work experience, plus bachelor's degree or higher
4	231,400	Waiters and Waitresses	Short-term on-the-job training
5	206,650	Janitors and Cleaners, Including Maids and Housekeeping Cleaners	Short-term on-the-job training
6	195,700	Registered Nurses	Associate's degree
7	176,450	Truck Drivers Light and Heavy	Short-term on-the-job training
8	168,000	Marketing and Sales Worker Supervisors	Work experience in related occupation
9	160,300	Nursing Aides, Orderlies, and Attendants	Short-term on-the-job training
10	137,050	General Office Clerks	Short-term on-the-job training
11	136,250	Systems Analysts	Bachelor's degree
12	135,500	Secretaries, Except Legal and Medical	Postsecondary vocational training
13	123,300	Guards	Short-term on-the-job training
14	116,000	Child Care Workers	Short-term on-the-job training
15	114,200	Home Health Aides	Short term on-the-job training
16	113,000	Clerical Supervisors and Managers	Work experience in related occupation
17	112,400	Receptionists and Information Clerks	Short-term on-the-job training
18	111,950	Teachers, Secondary School	Bachelor's degree
19	103,950	Food Preparation Workers	Short-term on-the-job training
20	103,000	Teacher Aides and Educational Assistants	Short-term on-the-job training

Source: America's Labor Market Information Service and Bureau of Labor Statistics

Table 4. Occupational Projections for the South, Largest Number of New Jobs by Annual Average Earnings, Part-time Employment, and Unemployment Rates, 1996-2005

Rank	Occupation	1997 Average Annual Earnings	Proportion of Workers Employed Part-time	Unemployment Rate
1	Cashiers	$14,480	Very high	Very high
2	Retail Salesperson	$17,970	Very high	High
3	General Managers & Top Executives	$60,960	Very low	Very low
4	Waiters & Waitresses	$12,200	Very high	Very high
5	Janitors & Cleaners, Including Maids & Housekeeping Cleaners	$17,070	High	Very high
6	Registered Nurses	$41,400	High	Very low
7	Truck Drivers Light & Heavy	$28,580	Low	High
8	Marketing & Sales Worker Supervisors	N/A	Low	Very low
9	Nursing Aides, Orderlies, & Attendants	$16,890	High	High
10	General Office Clerks	$20,250	High	High
11	Systems Analysts	$51,360	Very low	Very low
12	Secretaries, Except Legal & Medical	$23,970	High	Low
13	Guards	$17,350	High	Very high
14	Child Care Workers	$14,630	Very high	High
15	Home Health Aides	$17,290	High	High
16	Clerical Supervisors & Managers	N/A	Very low	Very low
17	Receptionists & Information Clerks	$18,710	Very high	High
18	Teachers, Secondary School	$39,010	Low	Very low
19	Food Preparation Workers	$14,450	Very high	Very high
20	Teacher Aides & Ed. Assistants	$15,790	Very high	Low

Source: America's Labor Market Information Service and Bureau of Labor Statistics

part-time employment (i.e., 35 hours or less per week). Not surprising, occupations that will pay the lowest earnings are those that will provide less than full-time employment. Occupations that are likely to pay the highest incomes are expected to be the most likely to offer full-time employment (with the exception of registered nurses).

The third column in Table 4 reveals that occupations expected to provide some of the lowest wages are also the most likely to be victims of the highest rates of unemployment, while those occupations that are expected to pay the highest earnings will witness relatively low rates of unemployment. More than half of the occupations that are projected to realize large gains in the number of new jobs will be subjected to "very high" or "high" unemployment rates.

In summary, given where the largest numerical gains in jobs are expected to occur, it is evident that many Southerners, by 2005, will be engaged in work that requires little education, pays poorly, involves part-time work, and that places individuals at risk of frequent unemployment spells. In fact, most of the "Top 20" occupations will not provide job holders with the necessary means to easily support themselves or their families. At the same time, a small portion of the occupations gaining large numbers of job slots will require a high level of education, will pay well, will provide full-time employment, and will prove stable.

The Fastest Growing Jobs: A Different Message

While the previous section of this report focused its attention on jobs that will realize the greatest numerical growth, how about those occupations that are expected to grow at the fastest pace? Table 5 offers a view of the occupations that are expected to expand most rapidly in the South over the 1996-2005 period. Also delineated are the educational requirements associated with these jobs. What the data show are that a good part of the fastest growing occupations are linked to the health services sector. This coincides with the continued aging of the baby boomers, a large population segment that will demand health care services over the next decade. The growth in demand for computer engineers, the occupation that is projected to have the highest rates of expansion in the South, may be the product of the central role that information technology will play in the jobs of the future. However, despite a high rate of growth associated with this occupation, it will contribute only a modest number of new jobs to the Southern

Tomorrow's Fastest Job Growth

- Most of tomorrow's fastest growing occupations will require extensive education or training.
- Occupations in the health services will undergo tremendous growth.
- Earnings among the fastest growing occupations will be considerably higher than for those experiencing the largest numerical gain in job slots.
- Many of the fastest growing occupations will offer only part-time employment.

Table 5. Occupational Projections for the South, Fastest Growing Occupations and Educational Requirements, 1996-2005

Rank	New Jobs	Occupation	Educational Requirements
1	58,100	Computer Engineers	Bachelor's Degree
2	63,900	Personal and Home Care Aides	Short-term on-the-job training
3	136,250	Systems Analysts	Bachelor's degree
4	114,200	Home Health Aides	Short-term on-the-job training
5	19,650	Physical and Corrective Therapy Assistants and Aides	Moderate-term on-the-job training
6	4,700	Occupational Therapy Assistants and Aides	Bachelor's degree
7	23,200	Physical Therapists	Bachelor's degree
8	10,300	Occupational Therapists	Bachelor's degree
9	42,050	Medical Assistants	Moderate-term on-the-job training
10	25,600	Human Services Workers	Moderate-term on-the-job training
11	16,900	Medical Records Technicians	Associate's degree
12	22,300	Residential Counselors	Bachelor's degree
13	78,050	Correction Officers	Long-term on-the-job training
14	39,550	Amusement and Recreation Attendants	Short-term on-the-job training
15	61,700	Teachers, Special Education	Bachelor's degree
16	16,000	Dental Hygienists	Associate's degree
17	16,200	Paralegals	Associate's degree
18	12,750	Respiratory Therapists	Associate's degree
19	27,850	Dental Assistants	Moderate-term on-the-job training
20	25,200	Radiologic Technologists and Technicians	Associate's degree

Source: America's Labor Market Information Service and Bureau of Labor Statistics

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economy. Only two occupations, systems analysts and home health aides, will be both fast growing and a creator of a large number of new jobs.

What is quite apparent is that the educational requirements associated with the fastest growing occupations will be at odds with those occupations generating the largest number of new jobs. That is, more than half of the fastest growing occupations will require an associate's degree or higher. Jobs that require moderate-term on-the-job-training, lasting up to a year, also are expected to grow fast. Very few will require short-term training.

The expected annual earnings, likelihood that jobs will involve less than full-time work, and whether workers are subject to periods of unemployment, are reported in Table 6. Once again, the listing of the Top 20 fastest growing occupations deviates from those occupations expected to create the largest number of new jobs. Ten of the occupations that will experience the fastest rate of growth will have earnings greater than $30,000 a year; four will have earnings exceeding $50,000 a year. Only one in four of the fastest growing occupations will offer an annual compensation below the $20,000 mark. Part-time employment, similar to the trend uncovered among the occupations with the largest number of new jobs, is expected to be high among the fastest growing occupations. At the same time, these positions are likely to be stable. Less than one-fourth of these jobs can be classified as "high" or "very high" in terms of their likelihood of subjecting workers to periods of unemployment.

Table 6. Occupational Projections for the South, Fastest Growing Occupations, Average Annual Earnings, Proportion of Workers Employed Part-time and Unemployment Rates, 1996-2005

Rank	Occupation	1997 Average Annual Earnings	Proportion of Workers Employed Part-time	Unemployment Rate
1	Computer Engineers	$56,590	Very low	Very low
2	Personal & Home Care Aides	$15,140	Very high	High
3	Systems Analysts	$51,360	Very low	Very low
4	Home Health Aides	$17,290	High	High
5	Physical & Corrective Therapy Assistants & Aides	$24,070	High	Low
6	Occupational Therapy Assistants & Aides	$29,760	High	Low
7	Physical Therapists	$56,060	High	Very low
8	Occupational Therapists	$50,610	High	Very low
9	Medical Assistants	$20,810	High	Low
10	Human Services Workers	$22,110	Very high	High
11	Medical Records Technicians	$21,220	High	Very low
12	Residential Counselors	$19,910	Low	Very low
13	Correction Officers	$30,340	Very low	Very low
14	Amusement & Recreation Attendants	$14,000	Very high	Very high
15	Teachers, Special Education	$39,200	Low	Very low
16	Dental Hygienists	$44,840	Very high	Very low
17	Paralegals	$33,300	Low	Low
18	Respiratory Therapists	$34,110	Low	Very low
19	Dental Assistants	$22,650	Very high	Low
20	Radiologic Technologists & Technicians	$32,840	Low	Very low

Source: America's Labor Market Information Service and Bureau of Labor Statistics

Further illustrating the importance of education, Table 7 lists the 20 occupations that are expected to witness the largest declines in jobs over the 1996-2005 period and the educational requirements commonly associated with such jobs. Many of the occupations that will under decline are linked to the textile industry or to industries that have undergone major transformation as a result of the introduction of new technologies. In some cases, firms have moved overseas in search of cheaper labor costs. Most of these jobs require moderate-term (lasting up to one year) on the job training or less. None require an associate's degree or higher.

The analysis points to the different dimensions of change that are expected to occur in the Southern workforce. For one, large numbers of workers will be employed in occupations that offer low incomes, require low skills, and are at risk of high unemployment. But, a rapid pace of growth will take place in occupations that require a higher level of education. These jobs will offer considerable financial compensation and will experience low unemployment rates. Finally, part-time employment will become more common among occupations that are growing at the fastest pace and growing in the greatest numbers.

Table 7. Occupational Projections for the South, Largest Declines in Employment by Educational Requirements, 1996-2005

Rank	Job Losses	Occupation	Educational Requirements
1	-59,050	Sewing Machine Operators, Garment	Moderate-term on-the-job training
2	-35,150	Typists, Including Word Processing	Moderate-term on-the-job training
3	-23,550	Textile Draw-out and Winding Machine Operators and Tenders	Moderate-term on-the-job training
4	-22,550	Computer Operators, Except Peripheral Equipment	Moderate-term on-the-job training
5	-17,950	Bank Tellers	Short-term on-the-job training
6	-14,150	Billing, Posting, & Calculating Machine Operators	Short-term on-the-job training
7	-10,850	Central Office Operators	Moderate-term on-the-job training
8	-9,200	Station Installers and Repairers, Telephone	Postsecondary vocational education
9	-7,600	Roustabouts	Short-term on-the-job training
10	-6,850	Custom Tailors and Sewers	Work experience in related occupation
11	-4,550	Duplicating, Mail, & Office Machine Operators	Short-term on-the-job training
12	-3,900	Central Office and PBX Installers & Repairers	Work experience in related occupation
13	-3,850	Personnel Clerks, Except Payroll & Timekeeping	Short-term on-the-job training
14	-3,750	Woodworking Machine Operators and Tenders, Setters and Set-up Operators	Moderate-term on-the-job training
15	-3,550	Peripheral Computer Equipment Operators	Moderate-term on-the-job training
16	-3,500	Head Sawyers and Sawing Machine Operators and Tenders, Setters and Set-up Operators	Moderate-term on-the-job training
17	-3,300	Directory Assistance Operators	Moderate-term on-the-job training
18	-2,900	Typesetting & Composing Machine Operators	Moderate-term on-the-job training
19	-2,750	Butchers and Meatcutters	Long-term on-the-job training
20	-2,650	Cleaners and Servants, Private Household	Short-term on-the-job training

Source: America's Labor Market Information Service and Bureau of Labor Statistics

The Current State of Education in the Rural South

There is a great deal of diversity within the Southern economy, and as such, job changes are likely to effect metro and non-metro areas of the South in different ways. The prognosis for the South's metropolitan areas is that it will continue to boom [26]. Such areas are attracting employers who are in search of highly skilled and educated workers. To say the least, employment opportunities in metropolitan areas will remain quite good [40]. In the rural South, rates of growth in employment have occurred at a slower pace. With its historical reliance on low-skill employment [26], the rural South has been disproportionately impacted by the declines in goods producing industries. No doubt, jobs will be available in the rural South, but they are likely to be most plentiful in the lower paying service-related sectors.

Clearly, one of the most critical ingredients for securing a decent job in the workforce is higher education. Workers will need post-secondary education in order to compete for good jobs in the workforce. Luckily, a larger group of Southerners are graduating from high school and attending college. However, the region as a whole still lags behind the nation in terms of educational attainment and academic performance. Fewer attend college and many lag behind in national math and reading test scores [26].

The information reported in Table 8 offers a good overview of how the rural South (i.e., its non-metro region) is faring in terms of educational attainment (as of 1997), and how this compares to the metropolitan South and the non-metro/metro areas of the U.S. As a general pattern, the data show the following [e]:

- The proportion of people without a high school degree tends to be highest in the non-metro South, irrespective of age. For example, the percentage of non-metro Southerners in the 45-64 age group with less than a high school education is more than twice the level found in the non-metro U.S. (27.6 percent versus 12.6 percent).

- Even among young adults, 25-34 years of age, nearly one in six possesses less than a high school education.

- Rural men and women of the South are the most likely to have earned less than a high school education, when compared to other non-metro or metro areas.

- The lack of a high school education is quite prominent among Hispanics (58.4 percent) and African Americans (41.5 percent) in the non-metro South. Again, these figures are higher than the non-metro U.S.

- The proportion of adults with a terminal high school education tends to be highest in the non-metro areas of the South, irrespective of age. Approximately 42 percent of rural Southerners between 25 and 44 years old possess only a high school degree. This figure is slightly higher than the percentage found in non-metro areas of the U.S.

Table 8. Educational Attainment in the Metropolitan and Non-Metropolitan South, 1997

		Metropolitan		Non-Metropolitan	
		South	U.S.	South	U.S.
		Percent with Less than High School			
Age Groups:	25 to 34	11.2	11.2	16.3	10.0
	35 to 44	11.7	9.9	18.8	9.1
	45 to 64	17.2	12.3	27.6	12.6
	65 and up	34.8	30.4	48.9	33.2
Gender:	Male	22.9	20.4	33.1	23.0
	Female	22.0	19.6	30.2	20.7
Race/Ethnicity:	White	17.8	15.3	27.6	20.1
	Hispanic	43.4	49.2	58.4	45.2
	African-American	29.8	27.8	41.5	33.5
		Percent with a High School Diploma			
Age Groups:	25 to 34	33.0	29.3	42.3	37.6
	35 to 44	33.1	31.9	42.6	41.0
	45 to 64	32.6	32.9	37.0	39.4
	65 and up	31.2	36.9	27.0	37.5
Gender:	Male	28.9	28.9	34.8	36.2
	Female	32.7	32.5	35.8	36.6
Race/Ethnicity:	White	31.4	31.6	36.1	37.1
	Hispanic	26.4	26.0	27.5	27.8
	African-American	32.6	33.6	34.4	29.4
		Percent with some Post-Secondary Education			
Age Groups:	25 to 34	27.6	27.8	27.9	32.3
	35 to 44	28.6	28.0	22.1	30.3
	45 to 64	24.1	25.2	20.9	26.9
	65 and up	17.8	17.5	14.9	18.3
Gender:	Male	24.2	24.5	20.2	24.4
	Female	25.7	26.2	22.6	27.6
Race/Ethnicity:	White	26.3	26.7	23.0	26.5
	Hispanic	18.7	17.5	12.8	18.9
	African-American	24.1	24.8	16.9	25.3
		Percent with a Bachelor's Degree or Higher			
Age Groups:	25 to 34	28.2	31.6	13.5	20.2
	35 to 44	26.6	30.2	16.5	19.5
	45 to 64	26.1	29.6	14.5	21.0
	65 and up	16.1	15.2	9.2	11.1
Gender:	Male	24.0	26.2	11.9	16.4
	Female	19.6	21.7	11.4	15.1
Race/Ethnicity:	White	24.6	26.4	13.3	16.3
	Hispanic	11.5	7.3	**	8.1
	African-American	13.5	13.9	7.3	11.8

Source: America's Labor Market Information Service and Bureau of Labor Statistics

- Younger rural Southerners (25-34 years of age) have held their own, relative to their metro counterparts in the South, in terms of completion of some post-secondary education. This is less true of non-metro Southerners who are Hispanic or African-American.

- Those with the highest educational attainment (bachelor's degree or higher) tend to be less available in the non-metro South than is the case in the non-metro U.S. or the metro South. Less than 14 percent of rural Southerners in the 25-34 age group have completed a baccalaureate degree or higher (versus 20.2 percent for non-metro residents in the U.S.).

- Only 13.3 percent of non-metro Southern whites have a college degree, compared to 24.6 percent for the metro South. Among non-metro blacks, the percent with a college degree is just above the 7 percent mark, nearly 50 percent lower than the rate found in the metro South.

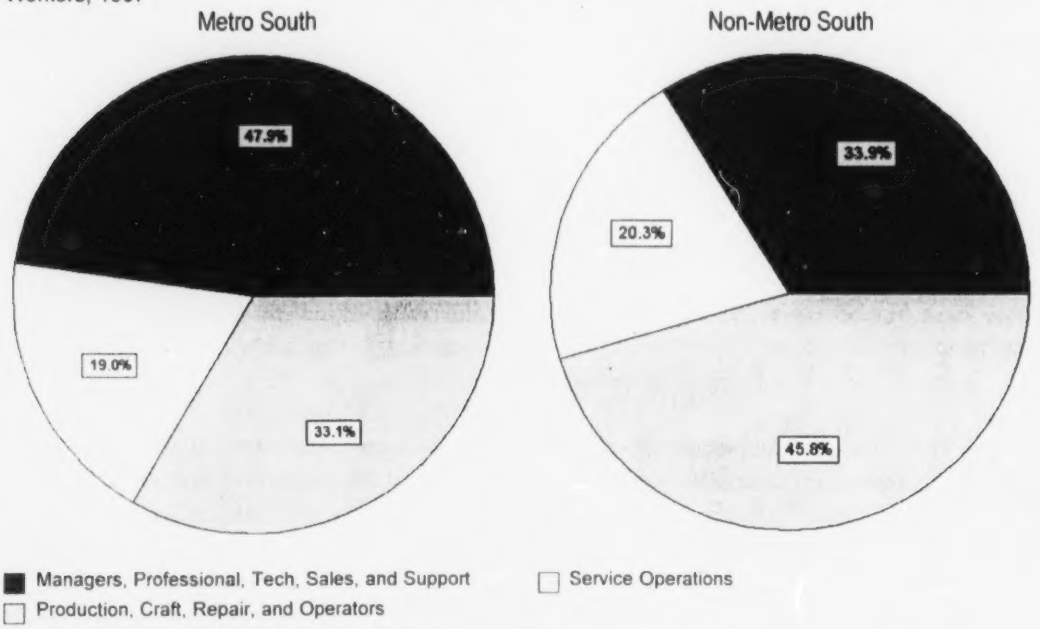
What these data show are that rural Southerners will remain hard pressed to qualify for the jobs that are experiencing a brisk rate of growth, given that the lion's share of these jobs will seek people who possess an associate's or bachelor's degree. Rural Southerners with a high school education or less are more likely to compete for jobs that are experiencing sizable numerical expansion, largely those in service-related occupations. Such jobs will demand nothing more than short-term on the job training and will provide low to modest wages.

Indeed, in order for rural Southerners to move ahead and compete for the top new jobs, their educational levels must be improved. Although there are signs that rural Southerners are making progress [19], there are still many educational obstacles facing potential workers and employers. For example, there are indications that the cost of higher education may be a barrier for many rural students [18]. Additionally, smaller rural schools do not have the resources to offer as many college prep courses as urban schools [19]. Rural workers are also less likely to receive training once beginning their jobs than are metropolitan workers [35]. Taken together, these factors may lead to a deficiency in workforce preparation in rural areas.

Thus, many researchers argue that rural areas are not equipped to meet the challenges of the changing workforce. They conclude that there is a shortage of worker credentials in rural areas. Businesses, especially high technology companies, have been and will continue to be hesitant to settle into rural areas fearing that they will not be able to find adequately skilled workers. As a result, these companies are drawn to other urban or suburban regions that have a sufficient pool of educated and skilled labor. The educational credentials of current and emerging workers have direct consequences on the types of employment available to workers.

A case in point is the current trends in employment reported in Figure 4. According to the 1997 Current Population Survey, metro and non-metro areas of the South do appear to attract different types of employers. Nearly 50 percent of employed metro residents in the South are working in white collar

Figure 4. Distribution of Occupations in the Metropolitan and Non-Metropolitan South, Full and Part-time Workers, 1997



Source: Current Population Survey, October Survey, 1997

occupations, such as professionals, managers, and technical sales and support, while only a third of non-metro residents are engaged in this type of work. However, nearly one-half of non-metro residents are engaged in blue collar production occupations while only a third of metro residents are working in these types of jobs.

Rural Policies

The rural South is a region facing many extremes which the region's State Rural Development Councils, as well as state, regional, and federal policy makers, must take into account. Improved education in the rural South offers hope for this region. These efforts must include the non-college bound, African Americans, and Hispanics. However, highly developed job skills are useless unless the potential workers have access to decent jobs, something which is often lacking in rural areas [15]. Therefore, it is critical that policy makers devote balanced attention to both education or training, and the expansion of better paying job opportunities in the rural South.

There are several factors associated with community economic growth that rely upon improvements in education. According to a 1997 report by the Economic Research Service, some of the factors

associated with community growth include high public education expenditures, greater high school completion rates, and higher concentrations of employment in service industries. Moreover, employment growth among non-metro counties is linked, in part, to adult illiteracy—those with the lowest rates of adult illiteracy have the highest rates of employment growth, while those with the highest rates of adult illiteracy are experiencing the lowest rates of economic expansion.

Conclusion

It is quite clear that the Southern workforce will continue to move toward service sector employment. While this may be good news for some workers, it means bad news for others. The structural changes in the economy will exacerbate the gap between the educated and undereducated, the skilled and unskilled, the rich and the poor, the employed and underemployed in our society. To reduce this chasm, rural areas of the South will need to continue emphasizing education in order to meet the skills required of tomorrow's best paying jobs. This analysis has shown that many of tomorrow's "hottest" jobs will require high levels of education and will offer attractive pay compensation. At the same time, there will be an abundance of jobs available to those with more limited education that will pay poorly, will offer many of its workers only part-time employment, and will subject them to a higher risk of unemployment.

As such, these patterns indicate that a polarization is emerging within the Southern workforce. This is especially likely to effect rural areas. The rural South, with its lagging educational rates and reliance on low-skill manufacturing, will need to focus its energies on building quality education and decent jobs for its residents. Although progress is being made, the commitment to further advance the human capital endowments of its workforce will pay dividends over the long-term.

Endnotes

[a] A complete description of the data sources and methodologies are reported in Appendix A of the full report that can be accessed online at http://www.ext.msstate.edu/srdc.
[b] A complete listing of the individual industries that make up these larger categories and individual industry projections are presented in Appendix B, Table 1 of the full report.
[c] Individual industry job additions/losses and percent change are reported in Appendix B, Tables 2 and 3 of the full report.
[d] A complete description of the data sources and methodologies is reported in Appendix A of the full report.
[e] See Appendix A in the full report for a detailed description of the data and methodology.

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